

WHAT IS CLAIMED IS:

1. A method for assembling a gas turbine engine, said method comprising:

providing an engine frame including an integrally formed outer band, an inner band, and a plurality of circumferentially-spaced apart struts extending radially therebetween;

providing at least one fairing that is formed as an integral single piece casting and includes a first sidewall and a second sidewall connected at a leading edge and a trailing edge such that at least one cooling chamber is defined therebetween; and

coupling the at least one fairing around at least one strut such that the strut extends through the fairing at least one cooling chamber and such that during the coupling process the fairing is only transitioned axially around the strut rather being slid radially along the strut.

2. A method in accordance with Claim 1 wherein said providing at least one fairing further comprises forming a parting line extending through the fairing between the fairing first and second sidewalls such that the fairing is divided into a forward fairing portion and an aft forward portion that are removably coupled together.

3. A method in accordance with Claim 2 wherein the fairing also includes at least one partition extending across the cooling chamber, wherein the partition includes a body and a pair of opposing ends that extend from an inner surface of each of the fairing sidewalls, the body extends between the opposing ends and has a first thickness measured between a forward side and an aft side of the body that is smaller than a second thickness of each of the opposed ends, said forming a parting line extending through the fairing between the fairing first and second sidewalls further comprises defining at least a portion of the parting line within the partition opposing ends.

4. A method in accordance with Claim 2 further comprising forming at least one retainer groove that is offset from, and is in contact with said parting line.

5. A method in accordance with Claim 2 further comprising positioning at least one sealing wire between the fairing forward and aft portions to facilitate enhancing sealing between the fairing forward and aft portions.

6. A fairing for use with a gas turbine frame strut, said fairing cast as an integral single piece comprising a first sidewall and a second sidewall connected together at a leading edge and a trailing edge such that at least one cooling chamber is defined therebetween, said fairing comprising at least one partition and at least one parting line, said at least one partition formed integrally with, and extending between, said first and second sidewalls, said at least one parting line dividing said fairing into a forward portion and a separate aft portion that are removably coupled together.

7. A fairing in accordance with Claim 6 wherein said at least one partition comprises a body and a pair of opposing ends extending from an inner surface of each of said fairing sidewalls, said body extending between said opposing ends and having a first thickness measured between a forward side and an aft side of said body, each of said opposing ends having a second thickness measured between a forward side and an aft side of each said end, said second thickness is different than said first thickness.

8. A fairing in accordance with Claim 7 wherein each said end second thickness is thicker than said body first thickness.

9. A fairing in accordance with Claim 7 wherein said parting line extends at least partially through each of said opposing ends.

10. A fairing in accordance with Claim 6 wherein said parting line is defined as a tongue and groove joint within at least a portion of said at least one partition.

11. A fairing in accordance with Claim 6 wherein said fairing is configured to couple axially around a strut such that said strut is at least partially contained within said fairing at least one cooling chamber.

12. A fairing in accordance with Claim 6 wherein said parting line further comprises at least one retainer groove, said retainer groove offset from said parting line to facilitate enhancing sealing between said fairing forward and aft portions.

13. A fairing in accordance with Claim 6 further comprising at least one sealing wire positioned between said fairing forward and aft portions, said sealing wire facilitates enhancing sealing between said fairing forward and aft portions.

14. A gas turbine engine comprising:

an engine frame comprising an outer band, an inner band, and a plurality of circumferentially-spaced apart struts extending radially therebetween, said plurality of struts formed integrally with said outer and inner bands; and

at least one fairing configured to be coupled around one of said plurality of struts such that a respective strut extends through said at least one fairing, said fairing formed as an integral single piece and comprising a first sidewall and a second sidewall connected together at a leading edge and a trailing edge such that at least one cooling chamber is defined therebetween, said fairing further comprising at least one partition and at least one parting line, said at least one partition extending between said first and second sidewalls, said at least one parting line separating said fairing into a forward portion and a separate aft portion that are removably coupled together.

15. A gas turbine engine in accordance with Claim 14 wherein said engine frame outer and inner bands define respective outer boundaries of a gas flowpath extending through said engine frame, said fairing is configured to facilitate shielding said strut from gases flowing through said flowpath.

16. A gas turbine engine in accordance with Claim 14 wherein said fairing at least one partition comprises a body and a pair of opposing ends extending from an inner surface of each of said fairing sidewalls, said body extending between said opposing ends and having a first thickness measured between a forward side and an aft side of said body, each of said opposing ends having a second thickness measured between a forward side and an aft side of each said end, said second thickness is thicker than said first thickness.

17. A gas turbine engine in accordance with Claim 16 wherein said at least one parting line extends at least partially through each of said fairing partition opposing ends, such that a coupling joint is at least partially defined within each of said opposing ends.

18. A gas turbine engine in accordance with Claim 17 wherein said coupling joint is configured as a tongue and groove coupling joint.

19. A gas turbine engine in accordance with Claim 14 wherein said fairing at least one parting line further comprises at least one retainer groove, said retainer groove offset from a remainder of said parting line, said at least one retainer groove facilitates enhancing sealing between said fairing forward and aft portions.

20. A gas turbine engine in accordance with Claim 14 wherein said fairing further comprises at least one sealing wire positioned between said fairing forward and aft portions, said sealing wire facilitates enhancing sealing between said fairing forward and aft portions.